

### **LISTING OF CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the present application.

Claim 1. (canceled)

Claim 2. (currently amended) An isolated ~~and purified~~ nucleic acid ~~encoding an 11-alpha hydroxylase, wherein said nucleic acid comprises the DNA~~ comprising the nucleotide sequence of SEQ ID NO: 1.

Claims 3-9. (withdrawn)

Claims 10-26. (canceled)

Claim 27. (currently amended) ~~The method of claim 17, wherein said *Aspergillus ochraceus* 11-alpha hydroxylase is~~ A method of expressing a polypeptide that can catalyze the 11-alpha-hydroxylation of a steroid compound comprising a 3-keto substituent and a 4,5-double bond, the method comprising:  
(a) transforming or transfecting host cells with an expression cassette comprising a promoter operably linked to a nucleic acid that encodes the polypeptide; and  
(b) expressing the polypeptide in the host cells;  
wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 2.

Claims 28-29. (canceled)

Claims 30-34. (withdrawn)

Claim 35. (canceled)

Claims 36-45. (withdrawn)

Claims 46-49. (canceled)

Serial No. 10/021,425  
3196/00/US (26648)  
Amendment C  
November 1, 2004

Claims 50-56. (withdrawn)

Claim 57. (canceled)

Claim 58. (currently amended) ~~The~~ An isolated nucleic acid that specifically hybridizes under ~~highly stringent~~ high stringency conditions to ~~the~~ a nucleic acid ~~of claim 2~~ comprising the nucleotide sequence of SEQ ID NO:1.

Claims 59-77. (withdrawn)

Claim 78. (currently amended) An isolated ~~and purified~~ nucleic acid encoding a polypeptide, ~~wherein said polypeptide~~ the amino acid sequence of which is at least 99% identical to SEQ ID NO:2.

Claim 79. (currently amended) An isolated ~~and purified~~ nucleic acid encoding a polypeptide, ~~wherein said polypeptide~~ the amino acid sequence of which is at least 95% identical to SEQ ID NO:2.

Claims 80-83. (canceled)

Claim 84. (new) The nucleic acid of claim 78, wherein the polypeptide can catalyze the 11-alpha-hydroxylation of a steroid compound selected from the group consisting of androstenedione and canrenone.

Claim 85. (new) The nucleic acid of claim 84, wherein the steroid compound is androstendione.

Claim 86. (new) The nucleic acid of claim 84, wherein the steroid compound is canrenone.

Claim 87. (new) The nucleic acid of claim 79, wherein the polypeptide can catalyze the 11-alpha-hydroxylation of a steroid compound selected from the group consisting of androstenedione and canrenone.

Claim 88. (new) The nucleic acid of claim 87, wherein the steroid compound is androstendione.

Claim 89. (new) The nucleic acid of claim 87, wherein the steroid compound is canrenone.

Claim 90. (new) An isolated nucleic acid encoding a polypeptide, wherein the polypeptide can catalyze the 11- $\alpha$ -hydroxylation of a steroid compound selected from the group consisting of androstendione and canrenone.

Claim 91. (new) The nucleic acid of claim 90, wherein the amino acid sequence of the polypeptide is at least 50% identical to SEQ ID NO:2.

Claim 92. (new) The nucleic acid of claim 90, wherein the amino acid sequence of the polypeptide is at least 75% identical to SEQ ID NO:2.

Claim 93. (new) The nucleic acid of claim 90, wherein the steroid compound is androstendione.

Claim 94. (new) The nucleic acid of claim 93, wherein the amino acid sequence of the polypeptide is at least 50% identical to SEQ ID NO:2.

Claim 95. (new) The nucleic acid of claim 93, wherein the amino acid sequence of the polypeptide is at least 75% identical to SEQ ID NO:2.

Claim 96. (new) The nucleic acid of claim 90, wherein the steroid compound is canrenone.

Claim 97. (new) The nucleic acid of claim 96, wherein the amino acid sequence of the polypeptide is at least 50% identical to SEQ ID NO:2.

Claim 98. (new) The nucleic acid of claim 96, wherein the amino acid sequence of the polypeptide is at least 75% identical to SEQ ID NO:2.

Claim 99. (new) A method of expressing a polypeptide that can catalyze the 11- $\alpha$ -hydroxylation of a steroid compound selected from the group consisting of androstendione and canrenone, comprising:

(a) transforming or transfecting host cells with an expression cassette comprising a

promoter operably linked to a nucleic acid that encodes the polypeptide, and

(b) expressing the polypeptide in the host cells.

Claim 100. (new) The method of claim 99, wherein the steroid compound is androstendione.

Claim 101. (new) The method of claim 99, wherein the steroid compound is canrenone.

Claim 102. (new) The method of claim 99, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 2.

Claim 103. (new) An expression cassette comprising a promoter operably linked to the nucleic acid of claim 2.

Claim 104. (new) A host cell comprising the expression cassette of claim 103.

Claim 105. (new) The host cell of claim 104, wherein the expression cassette is integrated into the chromosome of the host cell.

Claim 106. (new) The host cell of claim 104, wherein the expression cassette is integrated into an expression vector.

Claim 107. (new) An expression cassette comprising a promoter operably linked to the nucleic acid of claim 90.

Claim 108. (new) A host cell comprising the expression cassette of claim 107.

Claim 109. (new) The host cell of claim 108, wherein the expression cassette is integrated into the chromosome of the host cell.

Claim 110. (new) The host cell of claim 108, wherein the expression cassette is integrated into an expression vector.